

42390P10807

PATENT

REMARKS

Claim 4 stands rejected under 35 U.S.C. §112 for reciting a limitation with insufficient antecedent basis. Claim 4 has been amended to overcome this rejection. Accordingly, the applicants respectfully request the withdrawal of the rejection of claim 4 under 35 U.S.C. §112.

Claims 1-36 stand rejected under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 5,530,860 ("Matsuura"). Matsuura describes a control program for assigning actual central processing units ("CPUs") to guest virtual machines ("VMs"). See column 5, line 67 to column 6, line 5.

The examiner argues that Matsuura, in column 10, lines 12-20 and lines 47-63 teaches trapping a change in execution among the VMs. However, the cited portion of Matsuura describes a difference in the process of assigning a CPU to a VM, where the difference is based on the type of interrupt received. See step S54 of Figure 12 of Matsuura ("changing process according to contents [of an interruption process unit] in response to interruption"). The interrupt is not caused by the process of assigning a CPU to a VM. Rather, the process of assigning a CPU to a VM responds to the interrupt.

In contrast, the present invention, as set forth in claim 1, includes "trapping, by processor, a change in execution among schedulable entities." Matsuura does not describe trapping a change in execution among VMs or any other schedulable entities. The interrupt of Matsuura is not caused by a change in execution among the guest virtual machines. Rather, Matsuura's process of assigning a CPU to a VM responds to an interrupt. A change in execution among Matsuura's VMs may result from an interrupt, not vice versa.

Therefore, Matsuura does not anticipate the invention as set forth in independent claim 1, or in any of independent claims 13, 25, or 35, each of which include a limitation corresponding to trapping a change in execution among schedulable entities. Furthermore, Matsuura does not anticipate the invention as set forth in claims 2-12, 14-24, 26-34, or 36, because of the dependence of each of these claims on an independent claim that Matsuura does not anticipate.

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Accordingly, the applicants respectfully request the withdrawal of the rejections of claims 1-36 based on the examiner's argument of anticipation by Matsuura.

Claims 1, 11-13, 23-25, and 31-34 stand rejected under 35 U.S.C. §102(e) as being anticipated by U.S. Patent No. 6,374,286 ("Gee"). Gee describes a processor running multiple Java virtual machines ("JVMs"), with each JVM operating in a separate time slice called a partition. Each partition is "allotted a fixed period of time in which to operate, and, at the end of the allotted time, a context switch is forced to another JVM operating in the next partition." See Gee's Abstract.

The examiner argues that Gee's Abstract teaches trapping a change in execution among the JVMs. The applicants respectfully disagree. Gee teaches a switch from a currently operating JVM to a master JVM at the end of a partition time period, then a switch to the next scheduled JVM. See column 23, line 65, to column 24, line 13. Gee does not describe trapping such a context switch. Gee's descriptions of traps and interrupts relate to continuing user threads until a trap occurs (column 22, line 64 to column 23, line 9) and defining partitions with non-maskable interrupts (column 25, lines 19-39). These descriptions are of traps and interrupts causing thread and context switches, not vice versa.

In contrast, the present invention, as set forth in claim 1, includes "trapping, by processor, a change in execution among schedulable entities." Gee does not describe trapping a change in execution among JVMs or any other schedulable entities. Therefore, Gee does not anticipate the invention as set forth in independent claim 1, or in any of independent claims 13 or 25, each of which include a limitation corresponding to trapping a change in execution among schedulable entities. Furthermore, Gee does not anticipate the invention as set forth in claims 11, 12, 23, 24, or 31-34, because of the dependence of each of these claims on an independent claim that Gee does not anticipate.

Accordingly, the applicants respectfully request the withdrawal of the rejections of claims 1, 11-13, 23-25, and 31-34 based on the examiner's argument of anticipation by Gee.

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Claims 1, 9, 10, 12, 13, 21, 22, 24, 25, 30, 35, and 36 stand rejected under 35 U.S.C. §102(e) as being anticipated by U.S. Patent No. 6,732,220 ("Babaian"). Babaian describes the execution of foreign binary code on a host computer. See column 4, lines 4-27. A virtual machine manager residing in Babaian's host computer "is responsible for managing a plurality of foreign virtual memory configurations," where "each foreign virtual memory configuration corresponds to a virtual machine." See column 4, lines 46-51.

The examiner argues that Babaian, in column 4, line 44 to column 5, line 22, teaches trapping a change in execution among the virtual machines. The applicants respectfully disagree. The cited portion of Babaian describes a support operating system that spawns new host virtual machines as part of the binary translation process, attaches foreign virtual machines to corresponding host processes, and destroys existing virtual machines on a selective basis. Babaian does not mention trapping at all.

Therefore, Babaian does anticipate the present invention, as set forth in claim 1, which includes "trapping, by a processor, a change in execution among schedulable entities," or as set forth in independent claims 13, 25, or 35, which include corresponding limitations. Furthermore, Babaian does not anticipate the invention as set forth in claims 10, 12, 21, 22, 24, 30, or 36, because of the dependence of each of these claims on an independent claim that Babaian does not anticipate.

Accordingly, the applicants respectfully request the withdrawal of the rejections of claims 1, 9, 10, 12, 13, 21, 22, 24, 25, 30, 35, and 36 based on the examiner's argument of anticipation by Babaian.

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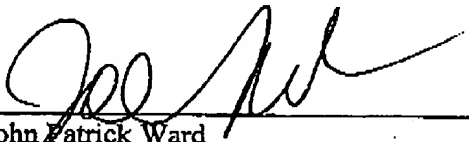
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CONCLUSION

Based on the foregoing, the applicants respectfully submit that all of the examiner's rejections have been overcome, and that claims 1-36 are in condition for allowance. The applicants therefore respectfully request the issuance of a Notice of Allowance. Please charge any necessary fees to our Deposit Account No. 02-2666.

Respectfully submitted,

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